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EXAMINER

ATALA, JAMIE JO

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/679,069	Applicant(s) PARK, CHONG-MOK	
	Examiner JAMIE JO VENT	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed April 24, 2008 have been fully considered but they are not persuasive. On pages 10-11 applicant argues that McIlvain et al (US 5,765,200) in view of O'Connor et al (US 2005/0244138) fails to disclose, suggest, or teach the following limitation, "sequentially assigning free blocks as a discontinuous circular buffer blocks in a disk recording area, based on the control information when a time-delayed viewing mode is selected" as recited in Claim 1. It is noted that McIlvain et al discloses sequentially assigning free blocks in a circular buffer as seen in Figure 2 and described in Column 5 Lines 20-52. Additionally, it is noted that O'Conner further teaches the placing of information in discontinuous circular buffer as seen in Figure 4 and described in paragraphs 0036-0037. The recorded information as seen in Figure 4 show stored information in sectors that are not adjacent to each other and therefore considered discontinuous.

In response to applicant's argument, on pages 11-15, that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case O'Connor et al teaches the ability to control information being stored on a storage unit

(i.e. circular buffer) and thereby allow the information that is stored to be manipulated, played, edited, and restored as described in Paragraphs 0027-0030.

Additionally, applicant argues on pages 13-17 the sequentially assigning free block as discontinuous circular buffer. It is noted that as described above that O'Conner meets the limitation and thereby has been previously addressed. Furthermore, it is noted that the applicant argues that the previous art of record fails to disclose, suggest, or teach the following limitation of "control information in response to a time-delayed viewing mode selected" as recited in Claim 21. It is taught by O'Conner in paragraphs 0062-0067 the control information being used to control the video viewing modes as selected by the user. This allows for manipulation of the video and further provides the storage of the data onto unassigned blocks. Although, all of applicants points are understood the examiner can not agree and therefore the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6,8,18-20 rejected under 35 U.S.C. 103(a) as being unpatentable by McIlvain et al (US 5,765,200) in view of O'Connor et al (US 2005/0244138).

[claims 1, 18, 19]

In regard to Claim 1, McIlvain et al discloses a video stream processing method in a broadcast receiving system for time-delayed viewing, which includes disks having control information required for recording an input signal and reproducing recorded information recorded and a drive for driving the disks, the video stream processing method comprising:

- sequentially assigning free blocks in circular buffer blocks in a disk recording area(Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is based on control information as described in Column 5 Lines 20-52); and
- recording video streams for time-delayed viewing in the assigned circular buffer blocks (Column 5 Lines 20-35 describes the recording of video streams); however, fails to disclose the assigning of free blocks in the circular buffer is based on the control information when a time-delayed viewing mode is selected.

O'Connor et al discloses a system wherein various programs are broadcasted, recorded, reproduced, and played back as seen in Figure 1. The system provides a storage area wherein data is randomly assigned and recorded on the recording medium as described in paragraphs 0036-0037. The storage is provided based on the information (Figure 14) being entered into the system as described in Paragraphs 0072-0077. The system provides recording of information in various buffers in order to prevent overwriting of data. Additionally, O'Connor et al teaches the placing of information in discontinuous circular buffer as seen in Figure 4 and described in

paragraphs 0036-0037. The recorded information as seen in Figure 4 show stored information in sectors that are not adjacent to each other and therefore considered discontinuous. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the video stream processing system, as disclosed by McIlvain et al and further incorporate a system that records to free blocks based on control information, as disclosed by O'Connor et al.

[claim 2]

In regard to Claim 2, McIlvain et al discloses a video stream processing method of claim 1, further comprising updating the control information and setting a pointer of a write point to a last one of the assigned circular buffer blocks after the recording of the video stream (Column 5 Lines 43-67 and Column 6 Lines 24-32 describes the setting the write pointer to the last assigned circular buffer block).

[claim 3]

In regard to Claim 3, McIlvain et al discloses a video stream processing method of claim 1, wherein the sequentially assigning of the free blocks comprises assigning the free blocks as the circular buffer blocks in a track and sector number ascending order (Column 7 Lines 15+ and Column 8 Lines 19-35 describes the assigning of free blocks in order of track and sector number).

[claim 4]

In regard to Claim 4, McIlvain et al discloses a video stream processing method of claim 1, wherein the control information comprises file attribute information, file assignment information, free block information for each track, and circular buffer block information

(Column 9 Lines 5-47 describes the information that comprises the control information in regard to information about the data).

[claim 5]

In regard to Claim 5, McIlvain et al discloses a video stream processing method of claim 1, further comprising: recovering the circular buffer blocks to the free blocks when the broadcast receiving system is initialized (Column 2 Lines 33-43 describes the recovering of free blocks once system task is initialized).

[claim 6]

In regard to Claim 6, McIlvain et al discloses a video stream processing method of claim 1, further comprising recovering the assigned circular buffer blocks to the free blocks and updating the control information when a next circular buffer block is assigned (Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is based on control information as described in Column 5 Lines 20-52).

[claim 8]

In regard to Claim 8, McIlvain et al discloses a video stream processing method of claim 5, wherein the recovering of the circular blocks comprises updating information of one of the circular buffer blocks which is pointed by a pointer at a write point with free block information, the video stream processing method further comprising initializing the pointer (Column 5 Lines 43-67 and Column 6 Lines 24-32 describes the setting the write pointer to the last assigned circular buffer block).

[claim 18]

In regard to Claim 18, the claim limitations have been discussed in Claim 1.

[claim 19]

In regard to Claim 19, the claim limitations have been discussed in Claim 1.

[claim 20]

In regard to Claim 20, the claim limitations have been discussed in Claim 4.

3. Claims 21, 23-26,28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable by Aoki et al (US 6,009,231) in view of Barton et al (US 6,233,389) in further view of O'Connor et al (US 2005/0244138).

[claim 21]

In regard to Claim 21, Aoki et al discloses a broadcast receiving system, comprising:

- a hard disk drive having a hard disk as a recording medium, the recording medium having control information for recording an input signal and reproducing recorded information (Figure 1 shows a hard disk for the recording medium wherein control information is recorded as described in Column 6 Lines 25+);
- a controller which sequentially assigns free blocks as discontinuous circular buffer blocks on the recording medium, based upon the control information in response to a time-delayed viewing mode being selected, and which records video streams for time-delayed viewing in the assigned circular buffer blocks (Figure 4a-4c shows the storing of the data on the circular buffer wherein it is further described in Column 7 Lines 59+ through Column 8 Lines 1-34 describes the selection and storing of the video streams); however, fails to disclose the

assigning of free blocks in the circular buffer is based on the control information when a time-delayed viewing mode is selected.

Barton et al discloses a system wherein various programs are broadcasted, recorded, reproduced, and played back. The system provides a circular buffer for assigning information as seen in Figure 6. The data is recorded based on control information as seen in Figures 4 and 9 and described in Column 5 Lines 3-32 and Column 8 Lines 9+. The system provides recording of information in various buffers in order of priority. For example, if a show is being recorded it will be recorded in the hard drive but if the current broadcast showing is being recorded while watching the show will be recorded in the buffer and deleted once the space is needed. This provides the system the ability to distinguish between various priorities of show while efficiently handling the memory of the system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the video stream processing system, as disclosed by Aoki et al , and further incorporate a system that records on control information, as disclosed by Barton et al.

Aoki in view of Barton fails to disclose the randomly assigning and recording of blocks on the recording medium based on information sent by the user. It is taught by O'Connor et al a system wherein various programs are broadcasted, recorded, reproduced, and played back as seen in Figure 1. The system provides a storage area wherein data is randomly assigned and recorded on the recording medium as described in paragraphs 0036-0037. The storage is provided based on the information (Figure 14) being entered into the system as described in Paragraphs 0072-0077. Therefore, it

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would have been obvious to one of ordinary skill in the art at the time of the invention to use the video stream processing system, as disclosed by Aoki et al in view of Barton, and further incorporate a system that records to free blocks based on user control information, as disclosed by O'Connor et al.

[claim 23]

In regard to Claim 23, Aoki et al discloses a broadcast receiving system of claim 21, further comprising:

- an input device which enables simultaneous operation of the time-delayed viewing mode and a recording mode (Figure 1 shows input device wherein time delayed viewing and recording is available);
- wherein the controller assigns free blocks of the recording medium, records the video streams of a channel to be recorded in the assigned free blocks in response to the selection of the simultaneous operation of the time-delayed and recording modes, assigns free blocks nearest to the recorded free blocks as circular buffer blocks, and records the video streams for time-delayed viewing in the assigned circular buffer blocks (Figure 4a-4c shows the storing of the data on the circular buffer wherein it is further described in Column 7 Lines 59+ through Column 8 Lines 1-34 describes the selection and storing of the video streams).

[claim 24]

In regard to Claim 24, the claim limitations have been discussed in Claim 23.

[claim 25]

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In regard to Claim 25, Aoki et al discloses a broadcast receiving system of claim 21, wherein the controller updates the control information and sets a pointer of a write point to a last one of the assigned circular buffer blocks after recording the video streams (Figures 12a-12c shows the control information that points to write point of last block).

[claim 26]

In regard to Claim 26, Aoki et al disclose a broadcast receiving system of claim 21, wherein the hard disk drive comprises: a control unit which controls the hard disk drive; and an expander which expands the hard disk drive (Figure 1 shows the hard drive wherein it is well known a controller and expander exists for control of the hard drive).

[claim 28]

In regard to Claim 28, the claim limitations have been discussed in Claim 23.

[claim 29]

In regard to Claim 29, Aoki et al discloses a broadcast receiving system of claim 28, wherein the circular buffer blocks form a circular buffer write and read pointers of the circular buffer have special pointer values in the random access memory so that the circular buffer blocks of the circular buffer are discontinuous (Figures 12a-12c shows the control information that points to write point of last block as further described in Column 11 Lines 5-60).

[claim 30]

In regard to Claim 30, the claim limitations have been discussed in Claim 29.

[claim 31]

In regard to Claim 31, the claim limitations have been discussed in Claim 29.

[claim 32]

In regard to Claim 32, the claim limitations have been discussed in Claim 21.

4. Claims 7, 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McIlvain et al (US 5,765,200) in view of O'Connor et al (US 2005/0244138) in further view of Aoki et al (US 6,009,231).

[claim 7]

In regard to Claim 7, McIlvain et al in view of Barton et al discloses a video stream processing method of claim 1, wherein the sequentially assigning free blocks comprises interleaved assigning the free blocks for each video stream (Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is based on control information as described in Column 5 Lines 20-52); however fails to disclose that if the video streams are of different channels to be recorded concurrently. Aoki discloses a system wherein reproduction of information is done through the use of a ring buffer. As further shown in Figure 1 various streams are broadcasted and entered into the system as further described in Column 1 Lines 12-41. The various transmitting of the broadcast channels allows the system to process various signals into the system for storing onto the ring buffer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a video stream processing method, as disclosed by McIlvain et al, and further incorporate a system wherein the video streams are different broadcast channels being entered into the system, as disclosed by Aoki et al.

[claim 10]

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In regard to Claim 10, McIlvain et al discloses a video stream processing method of claim 7, further comprising updating the control information and setting a pointer of a write point to a last one of the assigned circular buffer block each time the video streams are recorded in the free blocks subsequent to the recording of the video streams for time-delayed viewing in the assigned circular buffer blocks (Column 5 Lines 43-67 and Column 6 Lines 24-32 describes the setting the write pointer to the last assigned circular buffer block)..

[claim 9]

In regard to Claims 9, , McIlvain et al in view of Barton et al discloses a video stream processing method, as previously disclosed in Claim 1, however fails to disclose the following limitation that a broadcast receiving system for time-delayed viewing, which includes a hard disk drive having control information required for recording an input signal and reproducing recorded information recorded in a predetermined area, the video stream processing method. Aoki discloses a system wherein reproduction of information is done through the use of a ring buffer. As further shown in Figure 1 various streams are broadcasted and entered into the system as further described in Column 1 Lines 12-41. The various transmitting of the broadcast channels allows the system to process various signals into the system for storing onto the ring buffer. Additionally, Aoki discloses that the broadcast system has a time delayed viewing and storing as disclosed in Column 4 Lines 10+. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a video stream processing method, as disclosed by McIlvain et al, and further incorporate a system

wherein the video streams are different broadcast channels being entered into the system, as disclosed by Aoki et al.

[claim 11]

In regard to Claim 11, McIlvain et al discloses a video stream processing method of claim 9, wherein the free blocks nearest to the recorded free blocks are in a same track or a nearest track of the recorded free blocks (Figure 2 shows the assigning of free blocks to the circular buffer. The assigning is based on control information as described in Column 5 Lines 20-52).

[claim 12]

In regard to Claim 12, the claim limitations have been discussed in Claim 9.

[claim 13]

In regard to Claim 13, the claim limitations have been discussed in Claim 11.

[claim 14]

In regard to Claim 14, the claim limitations have been discussed in Claim 9.

[claim 15]

In regard to Claim 15, the claim limitations have been discussed in Claim 9.

[claim 16]

In regard to Claim 16, the claim limitations have been discussed in Claim 9.

[claim 17]

In regard to Claim 17, the claim limitations have been discussed in Claim 9.

6. Claims 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al (US 6,009,231) in view of Barton et al (US 6,233,389) in further view of Peters et al (US 5,884,284).

[claim 22]

In regard to Claim 22, Aoki et al discloses a broadcast receiving system of claim 21, discloses a random access memory that selectively stores information and has a video recovery unit that restores the video streams, as recited in Claim 21, however fails to disclose the following limitations:

- a first radio frequency tuner which receives an external broadcast signal, a second radio frequency tuner which receives an external analog broadcast signal,
- a video compressor which converts the received analog signal to a digital signal and compresses the digital signal, and
- a selector which selectively enables transmission of the external digital broadcast signal and the compressed digital signal.

Peters et al discloses a telecommunication system wherein tuners are present for receiving broadcast information as seen in Figure 1 and further described in Column 10 Lines 52-63. The video converts and compresses the digital signal wherein the random access memory will temporarily store the information as further described in Figure 1. The system comprising of frequency tuners allows for more information both digital and analog to be transmitted into the system and furthermore allows for proper conversion and selection of the data stream. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to use a broadcast receiving system, as disclosed by Aoki et al, and further incorporate tuners and video compressor and selector to the system, as disclosed by Peters et al, to allow for more information to be transmitted and entered into the system.

[claim 27]

In regard to Claim 27, Aoki discloses a broadcast receiving system of claim 22, wherein the controller comprises: a read-only memory which stores control program data to control the random access memory and the hard disk drive and a second random access memory which temporarily stores data during a control operation of the controller (Figure 1 shows the various memories that are used for permanent and temporary storage).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE JO VENT whose telephone number is (571)272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2623

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Examiner, Art Unit 2621